ANN ARBOR HISTORIC DISTRICT COMMISSION

Staff Report

ADDRESS: 418 South First Street, Application Number HDC14-148

DISTRICT: Old West Side Historic District

REPORT DATE: August 14, 2014

REPORT PREPARED BY: Jill Thacher, Historic Preservation Coordinator

REVIEW COMMITTEE DATE: Monday, August 11, 2014

	OWNER	APPLICANT
Name:	Margaret Wong & Ralph Nelson	Same
Address:	418 South First Street	
	Ann Arbor, MI 48103	
Phone:	(734) 998-2546	

BACKGROUND: This simple single-story cottage first appears in the 1928 Polk City Directory as the home of Gottleib Weltz, a mason. It features a partial-width front porch and one-over-one double hung windows. The house has had at least two rear additions since 1965. The garage does not appear on the 1965 Sanborn map, and was either constructed after that date or moved to its current site.

The applicant received a Certificate of Appropriateness from the HDC in August 2011 to demolish the existing garage and construct a new two story tandem garage with a studio above it (HDC11-103).

The applicant also received a Certificate of Appropriateness in July 2013 to modify the design of the garage/studio (HDC13-098), and a Certificate of Appropriateness in February 2014 to install solar panels onto the previously approved garage (HDC14-009).

LOCATION: The site is located on the west side of South First Street, south of West William and north of West Jefferson.

APPLICATION: The owners are seeking HDC approval to do the following work to a noncontributing structure: (1) replace existing asphalt shingles with standing seam steel roofing; (2) replace the person door at the east side of the south elevation with a window; and (3) add one square window to the second floor south elevation.



APPLICABLE REGULATIONS:

From the Secretary of the Interior's Standards for Rehabilitation:

- (9) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- (10) New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

From the Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings (other SOI Guidelines may also apply):

Building Site

<u>Recommended</u>: Identifying, retaining, and preserving buildings and their features as well as features of the site that are important in defining its overall historic character.

<u>Not Recommended</u>: Removing or radically changing buildings and their features or site features which are important in defining the overall historic character of the property so that, as a result, the character is diminished.

STAFF FINDINGS:

- 1) The homeowners desire a long-lasting steel roof that will outlive their solar panel installation and avoid the lead and arsenic runoff caused by asphalt shingles. Solar panels previously approved by the Commission would be clamped directly to the standing seams on the roof of the new garage/studio. The roof color is a very light steel grey with a clear finish, as illustrated by two photos in the application. The light color is more reflective and lowers air conditioning costs.
- 2) Since this is a new structure, the use of a metal roof is appropriate. The color is acceptable, and the roof does not affect the integrity of the historic home on the site, or neighboring historic structures.
- 3) The two proposed windows on the south elevation are an appropriate design and scale.
- **4)** Staff recommends approval since the application meets the SOI Standards and *Guidelines*, and the Ann Arbor Historic District Design Guidelines.

MOTIONS

Note that all motions are worded in the affirmative, and are only suggested.

I move that the Commission issue a certificate of appropriateness for the application at 418 South First Street, a contributing property in the Old West Side Historic District, to (1) replace existing asphalt shingles with standing seam steel roofing; (2) replace the person door at the east side of the south elevation with a window; and (3) add one square window to the second floor south elevation, as proposed. The work is compatible in exterior design, arrangement, texture, material and relationship to the rest of the building and the surrounding area and meets *The Secretary of the Interior's Standards for Rehabilitation* and *Guidelines for Rehabilitating Historic Buildings*, in particular Standards

E-7 (p. 3) 9 and 10 and the guidelines for building site, as well as the *Ann Arbor Historic District Design Guidelines*.

MOTION WORKSHEET:

I move that the Commission issue a Certificate of Appropriateness for the work at <u>418 South</u> <u>First Street</u> in the <u>Old West Side</u> Historic District

Provided the following condition(S) is (ARE) met: 1) STATE CONDITION(s)

The work is generally compatible with the size, scale, massing, and materials and meets the Secretary of the Interior's Standards for Rehabilitation, standard(S) number(S) *(circle all that apply)*: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

ATTACHMENTS: application, drawings, photos.

418 South First Street (2012 Assessors photo)



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ARBOR HISTORIC DISTRIC	T COMMISSION APPLICATION	N		ANN
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Historic Distric	t OLD WESTS	INE		
Name of Prop	erty Owner (If different than the applica GELO W	nt):		
Address of Pro	operty Owner: 418 5.18	1.84		
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	Section 2: A	pplicant Information		
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Date: 7/25/14		Signature of applicant:	JN HC .	~
		Section 3: Building Use (che	ck all that apply)	
Rental		ResidentialSi	ngle Family	Multiple Family



Ann Arbor Historic District Commission Application Applicant: Margaret Wong & Ralph Nelson (property owner) Address: 418 S. 1st St., Ann Arbor, MI, 48103; Old West Side Historic District

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oposed Changes (2 pages)

Project: Proposed Garage / S Submittal Date: July 25, 2014

Section 5: Description of P

This July 25, 2014 application

by the Historic District Commi

<u>11. 2013 (file #HDC13-098) a</u>

requests changes to a proposed garage / studio approved ssion (HDC) on August 11, 2011 (file #HDC11-103), July of Eebruary 13, 2014 (file #HDC14-009)

1. Provide a brief summary of proposed changes.

Applicant's proposal to demolish an existing one-story wood framed 14.3' x 20.3' one-car garage and replace it with a two-level wood framed two-car tandem garage with a studio space above remains unchanged.

Applicant proposes the following changes to the scheme approved by the HDC on

apileent confirmed with Chy of Ann Arbor Historic Preservation Coordinator JII Thach early April 2011 that the existing garage was not a contributing resource. Based on ugust 11, 2011 and JUIY 11, 2018 HDC approvals of proposed garage / studio project

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nor installing standing seam steel rooting with a Galvalume in an ior the following reasons:

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micro-inverters. Eactoring in these considerations, the project will endower to keep the

Is as low as possible above the roof surface.

rom steel roofing with a Galvalume finish does not contain the heavy nts (including lead and arsenic) found in roof run-off from asphalt of roofing with the Galvalume finish is listed on Living Building are "building-materials database. Steel reafine data not incorrected height of the pane

 The roof run-off metal toxic polluta shingle roofs. Ste Challenge's "Decl













Bethlehem

PRODUCT NAME

Galvalume[®] Sheet Galvalume[®] Plus Sheet

MANUFACTURER

Bethlehem Steel Corporation Sparrows Point Division Sparrows Point, MD 21219 Phone: (800) 521-4789 Website: <u>www.bethsteel.com</u>

PRODUCT DESCRIPTION

Coating: "Galvalume" is the registered trade name for a patented sheet steel product having a coating of corrosion-resistant aluminum-zinc alloy applied by a continuous hot dipping process. The alloy coating of aluminum and zinc provides an optimum balance between (a) the long-term general corrosion resistance, high temperature oxidation resistance and heat reflectivity of aluminum, and (b) the galvanic protection of zinc at scratches and cut edges.

"Galvalume Plus" is the registered trade name for a bare Galvalume sheet product with a thin, clear acrylic coating. This product offers several advantages, including:

- Can be rollformed dry, with no vanishing oil applied in our coating line or at the rollforming line. In fact, Galvalume Plus should only be roll formed dry.
- Panels will be delivered to the jobsite dry, with no vanishing oil on the surface.
- Resists fingerprinting and smudging during handling and installation at the jobsite.
- Provides excellent resistance to storage stain and transit corrosion.
- Provides a bright appearance which will weather uniformly.

Basic Use: Galvalume sheet -bare, acrylic-coated and prepainted -- is intended for applications where superior corrosion resistance is required, as in roofing, siding, pre-engineered buildings, appliances, air conditioner housings and other uses. Bare Galvalume sheet is also used for applications where resistance to oxidation at elevated temperatures is important, such as fireplaces, toasters and automotive exhaust systems.

Limitations: Based on experience to date, Bethlehem advises against contact of Galvalume sheet with lead, copper, graphite, unprotected steel, uncured concrete, or wet, green or pressure-treated wood; exposure of Galvalume sheet to water run-down from copper and the use of Galvalume sheet in harsh chemical or intensive animal confinement environs.

TECHNICAL DATA

Coating: The composition of the Galvalume sheet coating is typically 55% aluminum, 1.6% silicon and the balance zinc, nominal percentages by weight. The product is described in ASTM Specification A 792 and is available in three coating weights:

ASTM Designation AZ50 AZ55 AZ60

Triple Spot Average Minimum						
oz/sq ft	0.50	0.55	0.60			
Single Spot Minimum						
oz/sa ft	0.43	0.50	0.52			

A nominal coating weight of 0.50 oz/sq ft (total both sides) is equivalent to 0.8 mil thickness per side.

The coating is available as regular spangle or extra smooth surface, with or without chemical treatment. An oil coating may also be specified on bare Galvalume sheet.

Plus begins with Galvalume Bethlehem's standard high-quality bare Galvalume sheet and goes a step further. As a final step in the hot-dip coating process, a very thin acrylic coating is applied to both sides of the sheet using a sophisticated roll coater. This acrylic coating provides excellent resistance to storage stain and transit corrosion. Galvalume Plus eliminates the need for conventional chemical treatment and vanishing oil.

Atmospheric Corrosion Resis-30-year tance: Based on atmospheric test results, it is estimated that Galvalume sheet will outlast G90 galvanized by two to four times in marine, industrial and atmospheres. When rural compared to aluminum coated sheet steel. Galvalume sheet has superior corrosion resistance at sheared edges.

Salt Spray Corrosion Resistance: With cut edges protected, the coating on Galvalume sheet steel lasts five to ten times longer than the coating on G90 galvanized. In salt spray tests conducted with bare cut edges exposed, the corrosion resistance is typically three to four times that of G90 galvanized.

Temperature Behavior: High Bare Galvalume sheet can be used at temperatures up to 600°F without discoloration and up to 1250°F without heavy oxidation and scaling. Prolonged exposure to temperatures above 600°F can result in changes to the base metal characteristics of conventional Galvalume sheet. Galvalume H.T. Sheet (UL listed) will resist base metal change. Galvalume sheet applications subjected to these temperatures should be reviewed Bethlehem Sales with а representative.

Galvalume[®] is a registered trademark of BIEC International, Inc. or one of its licensed producers. Galvalume[®] Plus is a registered and protected trademark of BIEC International, Inc. *Formability:* Galvalume sheet can be formed about as readily as continuously annealed galvanized sheet. Lock forming and roll forming are readily accomplished.

Weldability: Galvalume sheet is readily weldable with conventional resistance and arc weldina processes. Conditions for resistance welding are similar to those used on galvanized steel. Spot welding electrodes should be redressed as required to maintain nugget size. RWMA Class 2 or dispersion-strengthened copper alloy electrodes are suggested. Galvalume sheet can be arc welded with the shielded metal-arc and gas metal-arc processes. The lower zinc content of the coating of Galvalume sheet results in considerably less fuming during arc welding, providing reduced fume hazards to welders. For further information on welding, contact a Bethlehem Sales representative.

Appearance: Uniform visual appearance of unpainted Galvalume sheet cannot be guaranteed. Even with Galvalume Plus, the normally occurring variations in surface appearance typical of all hot-dip products will still be present and will not be masked by the thin, clear acrylic film. If uniform visual appearance is critical, then prepainted Galvalume sheet should be ordered.

Paintability: Prepainted Galvalume sheet is an ideal product for many applications where the aesthetic appearance of a painted product is desired along with excellent atmospheric corrosion resistance. Such applications include pre-engineered metal buildings, architectural panels, roofing and siding, and other building components. For more information, consult Bethlehem's Data Sheet on Prepainted Galvalume Sheet.

Galvalume sheet may be fieldpainted with most paints suitable for galvanized: zinc-dust primers, butyral wash primers and acrylic latex paints.

Galvalume Plus may be field painted using water-based acrylic primers and/or topcoats. Note that field painting of either Galvalume or Galvalume Plus may have warranty implications.

Typical Mechanical Properties:

(Commercial Steel)	
Yield Strength	38 - 53 ksi
Tensile Strength	50 - 65 ksi
Total Elongation	20-36%
Hardness	50-65 HRB

(Structural steels, including 50 ksi and 80 ksi minimum yield strengths, are also available.)

INSTALLATION

To preserve the surface appearance of Galvalume sheet, only clean, dry gloves should be used during handling. Care should also be exercised to prevent the sheets from sliding over rough surfaces or each other. Fasteners and other component parts should have equivalent corrosion resistance. Galvalume sheet steel joints can effectively closed usina be appropriate sealants such as neutral-curing silicone rubber. If other types of sealants are considered, they should possess the long-term durability, adhesion and non-corrosive properties of neutral-cure silicone rubber. Soldering is not recommended.

AVAILABILITY AND COST

Availability: Galvalume sheet is available from our plants at Sparrows Point, MD and Jackson, MS. It can be obtained in thicknesses from 0.014" to 0.055" and in widths up to 48". Inquire for heavier thicknesses.

Galvalume Plus is available from our plant at Sparrows Point, MD. It can be obtained in thicknesses from 0.015" to 0.030" and in widths up to 48".

Cost: Galvalume sheet is priced competitively with G90 galvanized on a per square foot (or per part) basis. Specific price quotations for Bethlehem Galvalume sheet will be furnished upon request.

WARRANTY

Galvalume sheet conforms to the requirements of ASTM Specification A 792. Galvalume sheet is a component recognized by the American Gas Association and by Underwriters Laboratories, Inc. under File No. MH9372.

Galvalume sheet is conditionally warranted against rupture, structural failure or perforation due to corrosion for a period of up to 25 years and six months when used for building panel applications

MAINTENANCE

Properly installed Galvalume sheet requires no special maintenance. Galvalume sheet, like galvanized, is subject to wet storage staining and turns gray to black if moisture is trapped between coil laps, cut length sheets, or roll formed parts during shipping and storage. The mill treats Galvalume sheet to retard wet storage staining (unless otherwise requested); however, the user should take precautions to keep Galvalume sheet dry in transit, in storage and at work sites.

TECHNICAL SERVICES

For more information, call Bethlehem Steel at (800) 521-4789 or write: Bethlehem Steel Corp., Coated Sheet Marketing, 5111 North Point Boulevard, Sparrows Point, MD 21219; or visit our website at www.bethsteel.com.



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S-5-PV Kit

Introduction

Spacing PV Video

Ontario FIT Program

Bonding and Mounting Solar Attachment Options

LEED

Case Studies

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How Strong is S-5!? Load Test Results

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S-5-PV Kit Solar Attachment Solutions

The concept of combining photovoltaic arrays with standing seam metal roofing is growing—and for good reasons. A standing seam metal roof has a life expectancy consistent with that of framed PV modules.

A 30-year power source on a 40-year roof, along with zero-penetration technology, creates the most sustainable roof system available with alternative power generation, all without compromising the roof manufacturer's warranty!

Universal PV Grab

The Basic Components

S-5-PV Kit base assembly:





EdgeGrab™



For adjacent panels

For end panels

The S-5-PV Kit fits two grab components. The universal PV grab attaches adjacent panels, while the EdgeGrab[™] cleanly resolves end condition requirements.

*Due to the variety of attachment needs, S-5-PV Kits are sold separately from S-5! mini clamps. The S-5-PV Kit fits only S-5! mini clamps, NOT standard clamps.

S-5-PV Kit

The new S-5-PV Kit is one of the first solar module mounting solutions in the industry to be listed to the new UL subject 2703, a standard that covers both bonding and mounting. In order to meet the UL requirements, the S-5-PV Kit had to be submitted for tests, being evaluated under the severest of conditions to confirm that the product would withstand the elements while maintaining electrical conductivity.

Furthermore, the S-5-PV Kit has gained an ETL Listing to UL 1703. UL and ETL listings are widely recognized by most Authorities Having Jurisdiction, which means fewer inspection hassles for installers.



Please Note:Dimensions (in blue text) of the Universal PV Stud and the Mounting Disk are the same for the EdgeGrab illustration below.



